

REMARKS/ARGUMENT

Claims 7, 8, 10, 11, 14, 15, 22-27 and 29 are pending. Claims 6, 9, 12, 13, 16-19, 20, 21 and 28 have been cancelled without prejudice. Claims 24-27 and 29, the independent claims, have been amended.

The Office Action returned a partially initialed copy of the PTO/SB 08 form submitted with Information Disclosure Statement filed February 11, 2004. In particular, the citation of the Japanese reference itself was struck through for some reason, while the listing of the translated portion of the Japanese Office Action is initialed. However, according to Section 609 of the MPEP, the citation of the Japanese reference must be initialed, and may not be crossed out, since it is clearly in conformity with the rules, having been submitted with the description of relevance. The Examiner is requested to initial *both* citations on the attached duplicate copy of the PTO/SB 08 form.

Claims 12 and 16 were rejected under 35 U.S.C. 102(b) over U.S. Patent 5,404,513 (Powers et al.). Claims 17-18 were rejected under 35 U.S.C. 103(a) over Powers et al. in view of Applicant's Admitted Prior Art [Specification, pages 1-5]. Claim 19 was rejected under 35 U.S.C. 103(a) over Powers et al. in view of Applicant's Admitted Prior Art [Specification, pages 1-5] and U.S. Patent 6,467,003 B1 (Doerenberg et al.). Claims 6, 9, 13, 21 and 28 were rejected under 35 U.S.C. 103(a) over Powers et al. Claims 7, 10, 14, 20, 22, 24-27 and 29 were rejected under 35 U.S.C. 103(a) over Powers et al. and further in view of U.S. Patent 6,633,879 B1 (Jeffries) Applicant submits that independent claims 24-27 and 29 patentable for at least the following reasons.

Independent claim 24 is directed to a computerized method for controlling storage and retrieval of data in a memory device by constructing a data structure in which items of data are stored for search. The method comprises: a) forming an assumed tree structure in which all the items of data are stored; b) sequentially selecting a node from the assumed tree structure to select a sub-tree structure including the selected node and any child nodes of the selected node; c) forming an equivalent table storing at least a portion of the items of data

included in the selected sub-tree structure in a table form; d) determining whether the selected sub-tree structure satisfies one or more predetermined conditions; and e) when the selected sub-tree structure satisfies the one or more predetermined conditions, replacing the selected sub-tree structure with the equivalent table to construct the data structure. The predetermined conditions are that: 1) an amount of memory required to store a data structure including the equivalent table in place of the selected sub-tree structure is smaller than that required to store the assumed tree structure; and 2) search performance of the data structure is not lower than that of the assumed tree structure.

Powers et al. shows that in a summary tree, a summary node representing the same set of records appears in several places of the tree, depending on the order of dimensions used to access it. Accordingly, by changing different summary nodes having the same contents into a single summary node, the amount of memory can be reduced. However, Powers et al. does not show which part of the tree should be replaced with a summary node. Specifically, there is no teaching or suggestion of determining whether the amount of memory required when replacing a node with a summary table is smaller than that required without the use of such replacing. In contrast, the invention defined in claim 24 provides a criterion by which to determine which part of the tree should be replaced with the table.

For at least the foregoing reasons, claim 24 is believed clearly patentable over Powers et al. The other independent claims each recite features substantially similar to those discussed above in connection with claim 24 and are believed to distinguish over Powers et al. for at least the same reasons.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

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Respectfully submitted,

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